UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,465	11/15/2005	Atakan Peker	L2:00537	6325

71897 7590 04/15/2010

KAUTH , POMEROY , PECK & BAILEY ,LLP
2875 MICHELLE DRIVE
SUITE 110
IRVINE, CA 92606

EXAMINER	
WYSZOMIERSKI, GEORGE P	

ART UNIT	PAPER NUMBER
1793	

NOTIFICATION DATE	DELIVERY MODE
04/15/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO@KPPB.COM

Office Action Summary	Application No.	Applicant(s)	
	10/523,465	PEKER ET AL.	
	Examiner	Art Unit	
	George P. Wyszomierski	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/22/10 (RCE)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,5,8-10,12 and 17-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5,8-10,12 and 17-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 22, 2010 has been entered. Claims 1, 2, 4, 5, 8-10, 12, and 17-20 are pending in this application.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 2, 4, 5, 8-10, 12, and 17-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Independent claim 1 (and thus all of the instant claims) requires that articles of the invention be formed of a bulk-solidifying amorphous alloy that is i) free from Ni, Al and Be, and ii) has a glass transition temperature lower than 400^0C. The present specification does not set forth any specific examples of alloys including all of these features, and does not provide one with any particular guidance as to what alloy compositions would possess this particular combination of properties. The only possible description of the invention appears to be at pages

4-5 of the specification. The specification incorporates by reference a number of prior art documents, and states that those documents disclose "exemplary" materials of the invention. A careful review of those documents reveals very few embodiments that are "free from Ni, Al and Be" as claimed, and that those few embodiments have a glass transition temperature outside the range required by the instant claims. Thus, the examiner's position is that the specification as filed does not describe the invention as presently claimed.

The examiner further notes the recent decision of the Federal Circuit in *Ariad Pharmaceuticals et al. v. Eli Lilly* (decided March 22, 2010, available online at http://www.cafc.uscourts.gov/opinions/08-1248.pdf). In *Ariad*, the Court explains in detail the scope and purpose of the written description requirement in the statute. *Ariad* notes that:

> Although many original claims will satisfy the written description requirement, certain claims may not. For example, a generic claim may define the boundaries of a vast genus of chemical compounds, and yet the question may still remain whether the specification, including original claim language, demonstrates that the applicant has invented species sufficient to support a claim to a genus. The problem is especially acute with genus claims that use functional language to define the boundaries of a claimed genus. In such a case, the functional claim may simply claim a desired result, and may do so without describing species that achieve that result. But the specification must demonstrate that the applicant has made a generic invention that achieves the claimed result and do so by showing that the applicant has invented species sufficient to support a claim to the functionally-defined genus. (*Ariad*, p. 20)

Applying this to the present case, the claims are directed to a genus of bulk-solidifying amorphous alloys. With the exception of claim 2, the claims do not even state what elements(s) should be present in such alloys, merely that certain elements are excluded. The claims then define a desired result, i.e. various properties including a glass transition temperature below a certain point. It cannot be seen from the specification what alloy compositions would possess all the features required by the invention. The various documents incorporated by reference in the specification may be said to give one skilled in the art guidance as to what compositions to

"try" to use in the invention, but these documents are directed to alloys made from numerous base metals and containing a wide variety of alloying elements within them. If we first eliminate from all of these possibilities alloys that contain Ni, Al or Be (which are excluded by the instant claims), then the question becomes what compositions (among this narrower group of choices) would give the result desired in the present invention, e.g. glass transition temperature. The answer, as best as the examiner can determine, is none of them. Every exemplary alloy disclosed in the incorporated documents, and for which a glass transition temperature is specified, either a) contains Ni, Al or Be, or b) has a glass transition temperature outside the claimed range. Therefore, the examiner's position is that Applicants have not demonstrated the existence of a single species meeting the requirements of the instant claims, let alone that they have invented species sufficient to support a claim to the functionally-defined genus.

The *Ariad* decision goes on to state that:

> an adequate written description of a claimed genus requires more than a generic statement of an invention's boundaries. [citation omitted]. The patent at issue in Eli Lilly claimed a broad genus of cDNAs purporting to encode many different insulin molecules, and we held that its generic claim language to "vertebrate insulin cDNA" or "mammalian insulin cDNA" failed to describe the claimed genus because it did not distinguish the genus from other materials in any way except by function, i.e., by what the genes do, and thus provided "only a definition of a useful result rather than a definition of what achieves that result." [citation omitted] (*Ariad*, p. 21)

Once again, in the present case the present specification and claims merely define a useful result--alloy compositions that have a desirable combination of properties. They do not define anything that achieves that result--no specific composition or range of compositions that actually possess the desired properties.

4. Turning to Applicant's arguments filed with the present RCE, Applicant alleges that the structural chemical formulas recited on e.g. page 4 of the specification provide

an adequate generic description of the invention, and/or that a proper interpretation of at least two of the documents incorporated by reference in the specification would describe materials in accord with the claims. Applicant's arguments have been carefully considered, but are not persuasive of patentability because:

a) The examiner's position is that the present situation vis-à-vis the generic formula is analogous to that considered in *Ariad*. While the claims in *Ariad* were directed to a method and the present claims are directed to products, in both cases the claims recite "a genus of materials achieving a stated useful result...But the specification does not disclose a variety of species that accomplish the result....Thus...that specification fails to meet the written description requirement by describing only a generic invention that it purports to claim" (*Ariad*, p. 22).

b) With respect to the incorporated documents (specifically, U.S. Patents 5,618,359 and 5,735,975), Applicant provides a detailed account of how one could read those documents as supporting a claim to a composition lacking Ni, Al and Be. In the prior patents, Al and Zn are disclosed as alternative to each other and thus the Al amount could be zero, and similarly Ni and Co are disclosed as alternative to each other and thus the Ni amount could be zero. However,

i) It has been held that a description that merely renders an invention obvious does not satisfy the written description requirement. See *Lockwood v. American Airlines* (107 F.3d 1565, 1571-72, Fed.Cir. 1997), and *Regents of the University of California v. Eli Lilly* (119 F.3d 1559, 1567, Fed.Cir. 1997), both quoted in *Ariad* at pp. 25 and 34 respectively.

ii) Even if one reads those documents as rendering the alloy compositions as claimed obvious, this does not describe applicant's invention. Applicant's claimed invention involves a combination of an alloy composition and certain properties. Nothing in the '359 or '975 patents describes a material that both is lacking in three specific elements (at least one of which is present in every single exemplary embodiment in those patents) and which has a glass transition temperature in a certain range as presently claimed.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/George Wyszomierski/
Primary Examiner
Art Unit 1793

GPW
April 9, 2010